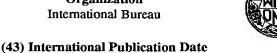


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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: APO-2 LIGAND/TRAIL VARIANTS AND USES THEREOF

(57) Abstract: The disclosure provides Apo-2 ligand variant polypeptides. Methods of making and chemically modifying Apo-2 ligand variant polypeptides are also provided. In addition, formulations of Apo-2 ligand variant polypeptides are provided. In addition, therapeutic methods for using Apo-2 ligand variant polypeptides are provided.



Internation PCT/USO, 1750

A. CLASSIFICATION OF SUBJECT MATTER									
IPC(7) : A61K 38/19; C12N 15/19; C07K 14/525 *US CL : 424/85.1; 514/2; 435/69.5, 172.3, 252.3, 320.1; 536;23.1, 23.5, 24.31									
According to International Patent Classification (IPC) or to both national classification and IPC									
B. FIELDS SEARCHED									
Minimum documentation searched (classification system followed by classification symbols) U.S.: 424/85.1; 514/2; 435/69.5, 172.3, 252.3, 320.1; 536;23.1, 23.5, 24.31									
Documentati	on searched other than minimum documentation to the	ne extent that such documents are include	d in the fields searched						
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Please See Continuation Sheet									
C. DOC	UMENTS CONSIDERED TO BE RELEVANT								
Category *	Citation of document, with indication, where a	ppropriate, of the relevant passages	Relevant to claim No.						
Y	WO 01/00832 (GENENTECH, INC.) 04 January 2		1-30 and 32						
=	(								
A	US 6,284,236 B1 (WILEY et al.) 04 September 20	1-30 and 32							
E, X	WO 03/029420 A2 (GENENTECH, INC.) 10 Apr	il 2003 (10.04.2003), Table i	1-30 and 32						
Further	documents are listed in the continuation of Box C.	See patent family annex.							
"A" document	pecial categories of cited documents:  defining the general state of the art which is not considered to	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention							
	cicular relevance plication or patent published on or after the international filing	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone							
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)		considered to involve an inventive st combined with one or more other suc	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art						
	referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent							
priority_d	published prior to the international filing date but later than the								
	ctual completion of the international search	Date of mailing of the international search report							
	(22.07.2004) ailing address of the ISA/US	Authorized officer (V)							
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Con	amissioner for Patents	Rachel B. Kapust Nella ( allana)							
	. Box 1450 xandria, Virginia 22313-1450	Telephone No. (703) 308-0196							
Facsimile No. (703) 305-3230									
orm PCT/ISA	A/210 (second sheet) (July 1998)								



İ	Interna 1 application No.
	PCT/US03/19750

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)					
This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:					
1. Claim Nos.: because they relate to subject matter not required to be searched by this Authority, namely:					
2. Claim Nos.:  because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:					
3. Claim Nos.: 31 and 33-38 because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).					
Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)					
This International Searching Authority found multiple inventions in this international application, as follows:					
<ol> <li>As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.</li> <li>As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.</li> <li>As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:</li> </ol>					
4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:  Remark on Protest  The additional search fees were accompanied by the applicant's protest.  No protest accompanied the payment of additional search fees.					

Form PCT/ISA/210 (continuation of first sheet(1)) (July 1998)

INTERNATIONA SEARCH REPO	RT	PCT/US0	

Continuation of B. FIELDS SEARCHED Item 3: EAST, MEDLINE, CAPLUS, SCISEARCH, BIOSIS, USPATFULL, PCTFULL search terms: TNFS10, TRAIL, APO2L, APO2 ligand, variant, polymorphism, mutant, mutation, substitution